41. (Once Amended) The dielectric layer of claim [as specified in Claim] 39, wherein a non oxidized portion of the metal layer forms at least a portion of a capacitor plate.

A1 Cont

42. (Once Amended) The dielectric layer of claim [as specified in Claim] 39, wherein the process further comprises [comprising]:

connecting a first electrode in contact with the electrolytic solution to a first terminal of a potential source; and

connecting the starting substrate to a second terminal of the potential source.

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43. (Once Amended) The dielectric layer of claim [as specified in Claim] 42, wherein the process further comprises [comprising]:

positioning a second electrode to contact the electrolytic solution; and

connecting the second electrode to the potential source.

44. (Once Amended) The dielectric layer of claim [as specified in Claim] 39, wherein the process further comprises [comprising the step of] adjusting the potential across the electrolytic solution to control the oxidation of the metal layer.

45. (Once Amended) The dielectric layer of claim [as specified in Claim] 39, wherein the process further comprises [comprising]:

monitoring a current in the electrolytic solution; and

adjusting a [the] potential of the electrolytic solution to maintain a desired amount of the current.

46. (Once Amended) A capacitor formed by a process[,] comprising:

forming a first capacitor plate;

forming a metal layer overlying the first capacitor plate;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer [in response to

said step of applying, said oxidized layer] forming at least a portion of a dielectric layer of the capacitor.

47. (Once Amended) The capacitor of claim [as specified in Claim] 46, wherein the process further comprises [comprising] forming a conductive layer overlying the oxidized metal layer to form a second capacitor plate.

A1 Cont

48. (Once Amended) A capacitor formed by a process[,] comprising:

forming an insulative layer overlying a substrate;

masking the insulative layer to define a region in which to fabricate the capacitor;

removing the insulative layer in an unmasked region to expose a portion of the substrate;

depositing a polysilicon layer overlying the insulative layer and the substrate and contacting the substrate;

B

removing portions of the polysilicon layer to expose an upper surface of the insulative layer;

depositing a metal layer to overly the polysilicon layer;

contacting the metal layer with an electrolytic solution;

applying an electrical potential to the electrolytic solution and the metal layer;

oxidizing[, in response to said step of applying,] at least a portion of the metal layer to form a metal oxide to function as a dielectric layer; and

forming an electrically conductive layer overlying the metal oxide.

49. (Once Amended) The capacitor of claim [as specified in Claim] 48, wherein the process further comprises [comprising] forming a conductive layer overlying the metal oxide.

Please add new claims 54-106.

A2

54. (New) A dielectric layer formed by a process comprising: B

forming a metal capacitor plate on a substrate assembly;

applying a potential across the metal capacitor plate; and

oxidizing at least a portion of the metal capacitor plate to form at least a portion of the dielectric layer.

55. (New) The dielectric layer of claim 54, wherein the substrate assembly is formed from silicon dioxide.

56. (New) The dielectric layer of claim 54, wherein the metal capacitor plate is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

B

57. (New) The dielectric layer of claim 56, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

58. (New) The dielectric layer of claim 39, wherein the starting substrate is formed from silicon dioxide.

59. (New) The dielectric layer of claim 39, wherein the metal layer is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

60. (New) The dielectric layer of claim 59, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

61. (New) The dielectric layer of claim 39, wherein the electrolytic solution is a basic solution.

62. (New) The dielectric layer of claim 39, wherein the electrolytic solution is an acidic solution.

63. (New) The dielectric layer of claim 39, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

64. (New) The dielectric layer of claim 39, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

65. (New) The capacitor of claim 46, wherein the first capacitor plate is formed on a silicon dioxide starting substrate.

66. (New) The capacitor of claim 46, wherein the metal layer is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

67. (New) The capacitor of claim 66, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

B

68. (New) The capacitor of claim 46, wherein the electrolytic solution is a basic solution.

69. (New) The capacitor of claim 46, wherein the electrolytic solution is an acidic solution.

70. (New) The capacitor of claim 46, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

71. (New) The capacitor of claim 46, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

72. (New) The capacitor of claim 48, wherein the substrate is formed from silicon dioxide.

73. (New) The capacitor of claim 48, wherein the metal layer is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

74. (New) The capacitor of claim 73, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

75. (New) The capacitor of claim 48, wherein the electrolytic solution is a basic solution.

76. (New) The capacitor of claim 48, wherein the electrolytic solution is an acidic solution.

B

77. (New) The capacitor of claim 48, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

78. (New) The capacitor of claim 48, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

Subt D2

79. (New) The capacitor of claim 19, wherein the first conductive plate is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

G1

80. (New) The capacitor of claim 79, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

Subt D3

81. (New) The capacitor of claim 19, wherein the second conductive plate is formed from a material selected from the group consisting of polysilicon and metal.

82. (New) The memory system of claim 20, wherein the first conductive plate is formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

G1

83. (New) The memory system of claim 82, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

Subt D

84. (New) The memory system of claim 20, wherein the second conductive plate is formed from a material selected from the group consisting of polysilicon and metal.

85. (New) The capacitor of claim 53, wherein the first capacitor electrode is formed from at

least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel.

86. (New) The capacitor of claim 85, wherein the at least one metal is alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead.

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87. (New) The capacitor of claim 53, wherein the second capacitor electrode is formed from a material selected from the group consisting of polysilicon and metal.

88. (New) A dielectric layer formed by a process comprising:

forming a metal layer overlying a starting substrate formed from silicon dioxide, the metal layer being formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer forming at least a portion of the dielectric layer.

89. (New) The dielectric layer of claim 88, wherein the electrolytic solution is a basic solution.

90. (New) The dielectric layer of claim 88, wherein the electrolytic solution is an acidic solution.

91. (New) The dielectric layer of claim 88, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

92. (New) The dielectric layer of claim 88, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

93. (New) A capacitor formed by a process comprising:

forming a first capacitor plate on a silicon dioxide starting substrate;

forming a metal layer overlying the first capacitor plate from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead;

contacting the metal layer with an electrolytic solution;

applying a potential across the electrolytic solution and the metal layer; and

oxidizing at least a portion of the metal layer to form an oxidized layer forming at least a portion of a dielectric layer of the capacitor.

A2 Cont

B

94. (New) The capacitor of claim 93, wherein the electrolytic solution is a basic solution.

95. (New) The capacitor of claim 93, wherein the electrolytic solution is an acidic solution.

96. (New) The capacitor of claim 93, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

97. (New) The capacitor of claim 93, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

Sub C3

98. (New) A capacitor formed by a process comprising:

forming an insulative layer overlying a silicon dioxide substrate;

masking the insulative layer to define a region in which to fabricate the capacitor;

removing the insulative layer in an unmasked region to expose a portion of the substrate;

depositing a polysilicon layer overlying the insulative layer and the substrate and contacting the substrate;

removing portions of the polysilicon layer to expose an upper surface of the insulative layer;

depositing a metal layer to overly the polysilicon layer, the metal layer being formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten,

C3

and nickel alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead;

contacting the metal layer with an electrolytic solution;

applying an electrical potential to the electrolytic solution and the metal layer;

oxidizing at least a portion of the metal layer to form a metal oxide to function as a dielectric layer; and

forming an electrically conductive layer overlying the metal oxide.

A3 Cont

99. (New) The capacitor of claim 98, wherein the electrolytic solution is a basic solution.

100. (New) The capacitor of claim 98, wherein the electrolytic solution is an acidic solution.

91

101. (New) The capacitor of claim 98, wherein the electrolytic solution is a solution of one part NH_4OH to ten parts water.

102. (New) The capacitor of claim 98, wherein the electrolytic solution is a 0.1 molar solution of $HClO_4$.

103. (New) A dielectric layer formed by a process comprising:

forming a metal capacitor plate on a substrate assembly, the metal capacitor plate being formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead;

B

applying a potential across the metal capacitor plate; and

oxidizing at least a portion of the metal capacitor plate to form at least a portion of the dielectric layer.

Sub Cx

104. (New) A capacitor, comprising:

a first conductive plate formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected

from the group consisting of strontium, barium, and lead;

a second conductive plate formed from a material selected from the group consisting of polysilicon and metal; and

a dielectric interposed between the first and second conductive plates, wherein the dielectric is an oxide of a material of the first conductive plate.

105. (New) A memory system, comprising:

a monolithic memory device comprising a capacitor, wherein the capacitor comprises

a first conductive plate formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead,

a second conductive plate formed from a material selected from the group consisting of polysilicon and metal, and

a dielectric interposed between the first and second conductive plates, wherein the dielectric is an oxide of a material of the first conductive plate; and

a processor configured to access the monolithic memory device.

106. (New) A capacitor comprising:

a first capacitor electrode formed from at least one metal selected from the group consisting of titanium, copper, gold, tungsten, and nickel, alloyed with at least one additional metal selected from the group consisting of strontium, barium, and lead;

a dielectric layer formed from the first capacitor electrode; and

a second capacitor electrode formed from a material selected from the group consisting of polysilicon and metal.